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ABSTRACT

The "Trouble Shooting Checklist" (TSC) is a diagnostic and predictive instrument designed to aid educational change agents, faculty, and administrators in estimating the effects of particular variables on an institution's potential for successfully adopting innovations. The TSC consists of 100 descriptive statements that are broken down into seven scales that indicate particular strengths and weaknesses within a school. Scale one (School Based Staff) contains items that are descriptive of the personality and leadership styles of principals, teachers, and counselors. Scale two (Communication) describes communication activities throughout the entire school system. The third scale (Central Administration) focuses on relations between the central offices, school, and school board. Scale four (Innovative Experience) describes a school's experience with innovations and attitudes toward innovation. School/Community Relations, scale five, attempts to tap information on such variables as the amount and sources of funding, the degree of interest and involvement of community groups in the school system, and attitudes of the community towards the school. Scale six (Organizational Climate) describes the work climate and organizational structure of both the school and the district, and scale seven describes student behavior, attitudes, and demographic characteristics. Each item is rated on a five point scale ranging from "very typical" to "very atypical." The instrument provides seven scale scores in addition to a total score. Appendixes contain a subjective rating sheet, a reference list, tables of data, and a copy of the checklist. (DMT)

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The "Trouble Shooting" Checklist (TSC)

For School-Based Settings

(Manual)

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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Preface

The "Trouble Shooting" Checklist for School-Based Settings is one of two instruments designed to measure an organization's potential for successfully adopting and implementing educational innovations. In particular, the instrument focuses on a school's communication patterns, innovative experience, school-based staff, central administration, relations with the community, organizational climate and students. Another form of the TSC focuses on similar characteristics of departments in higher-educational settings (The "Trouble Shooting" Checklist for Higher-Educational Settings).

Research in the area of innovation adoption has primarily focused on three major areas: the adoption-diffusion process; characteristics of innovations which make an innovation easily adopted; and, identifying characteristics of organizations in terms of "innovativeness." This instrument primarily takes advantage of literature in the last category and attempts to tie it in with the real-world experience of change agents. By identifying institutions which are not in a sufficient state of readiness to adopt innovations, the TSC can save potentially wasted time, efforts and money. As the development of new educational products and processes is becoming increasingly centralized, the number of innovations ready for adoption is rapidly increasing. Many institutions are seeking grants to adopt and implement these innovations without being sufficiently prepared to use the materials as the developer intended. The TSC should be useful for both change agents and in-house personnel in identifying strengths and weaknesses of an organization in relation to the adoption of innovations.

The first form of the TSC (Manning, 1973) was innovation-specific and focused only on higher-educational institutions. Subsequently, there have been three experimental, innovation-free forms of both the higher-educational and school-based TSC's. 120 institutions have been rated on the various experimental forms of the TSC. These experimental forms have resulted in the present two final forms. Since these forms have not been used in experimental or field studies, the author invites others to use the TSC in research and development activities.

The development of these instruments was funded through the National Institute of Education, the Procedures for Adopting Educational Innovations/CBAM Project at the Research and Development Center for Teacher Education, The University of Texas, Austin, Texas. In particular, I want to thank Gene Hall, the project director, for his support, and Ron Fox, Archie George, Sue Loucks, Beulah Newlove, Eddie Parker, Bill Rutherford, and all of the individuals who participated in the data collection. I want to especially thank Donna Buntain who has not only contributed her skills and expertise throughout the entire developmental period, but has provided me with invaluable encouragement and support.

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June 1976
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General Description of the TSC

The "Trouble Shooting" Checklists (TSC's) have been developed to assist educational change agents, faculty and administrators concerned with change, in their assessment of organizational variables predictive of an institution's potential for successfully adopting innovations. Two final forms of the TSC are now existant: the TSC for school-based settings (K - 12th grades), and the TSC for higher-educational settings (university and college level). This manual focuses on the school-based TSC, while another manual is available for the higher-educational TSC (see Manning, 1976).

The TSC is a diagnostic and predictive instrument designed to aid the user in estimating the effects of particular variables on the adoption-diffusion process. That is, the TSC provides users with a means of systematically organizing descriptive information in a predictive way. Because the TSC is broken into seven scales, a profile emerges, indicating particular strengths and weaknesses within a school (with respect to the adoption process).

Scales

The TSC consists of 100 Likert-type items which can be broken into the following seven scales:

I. School-based staff: This scale focuses on leadership and personality styles of teachers, principals, and counselors in relation to school innovativeness. Particular considerations include interpersonal and professional interaction patterns, staff attitudes, previous working experience, and demographic characteristics of the school-based staff.

II. Communications: This scale focuses on communication variables which significantly affect a school's potential for successfully adopting an innovation. In particular, this scale is concerned with patterns of communication (both within the school and the entire school system), initiators of communication, and types and forms of communication (with respect to both formal and informal channels of communication).

III. Innovative experience: This scale focuses on the school's experience with innovations and attitudes towards innovation. Focus is on both

past attempts at innovation and present plans for innovation. Particular variables which are considered are: the degree to which a school has prepared itself for the adoption of innovations; the reasons for considering adoption of innovations; the extent to which the school has realistically assessed its needs; the consultant role, the district role, and the community role in relation to both past and present plans for adopting innovations.

IV. Central administration: This scale focuses on relations between the central offices, school, and school board, and identifies attitudes of the central offices and school board toward innovation, their roles in relation to the school, and their awareness of the school's particular problems and needs.

V. School/Community relations: This scale focuses on such variables as the amount and sources of funding, the degree of interest and involvement of community groups in the school system, the socio-economic environment, and attitudes of the community towards the school.

VI. Organizational climate: This scale focuses on the work climate and organizational structure of both the school and the central district office. Some of the particular organizational variables which are considered include: how decisions are made; how goals are established; what task groups exist; how task groups function; how planning takes place; what resources are available; how resources are used; how the organizational hierarchy is defined both within the school and the school district; and, the degree of centralization within the school district.

VII. Students: This scale focuses on student behavior, attitudes and demographic characteristics. Particular considerations include: student behaviors in the classroom and the lunchroom, absenteeism, tardiness, discipline problems, minority relations, teacher/student rapport, and academic excellence.

Theoretical Framework and Origin

The "Trouble Shooting" Checklist was developed in conjunction with a project which has as its theoretical framework the Concerns-Based Adoption Model (Hall, 1974; Hall, Wallace & Dossett, 1973). In brief, the Concerns-Based Adoption Model (CBAM) focuses on an individual's Stages of Concern about, and Levels of Use of, an innovation. The ordering of concerns and use are postulated to be progressively more sophisticated throughout the adoption-implementation process. The relationship of the TSC to the Concerns-Based Adoption Model is based on the assumption that in order for stages of concern and levels of

use to develop progressively through the adoption-implementation process, an institution must meet certain conditions and be in an appropriate state of readiness. The TSC is designed to aid in predicting and diagnosing an institution's state of readiness.

Uses and Procedures of Administration

Uses of the TSC. The TSC has several major purposes. First the TSC intends to provide an overall norm-referenced, predictive score which estimates the likelihood of a school to successfully adopt and implement an innovation. Secondly, the TSC intends to provide a seven scale diagnostic profile which focuses on the strengths and weaknesses of a school's environment in relation to the adoption and implementation of innovations.

Within the context of being both a predictive and diagnostic instrument, the TSC may be used by several population groups for several different purposes:

1. Change agents (either internal or external) may use the TSC as a predictive tool to identify schools which would be most likely to adopt an innovation successfully. Such use of the TSC could assist a change agent or funding agency in determining whether commitments of time and money would be worthwhile in particular school settings.

2. Change agents (either internal or external) may use the TSC as a diagnostic tool to obtain information that would help in planning intervention strategies appropriate to a particular school. For example, if a school scored particularly low on one scale, a change agent could plan interventions which would strengthen the school's particular weakness (e.g., establish new communication networks, etc.).

3. Administrators and teachers interested in change may use the TSC to identify problem areas within their school. If a school is considering the adoption of a new program, members could use the TSC to self-evaluate the school and identify strengths and weaknesses which would affect the adoption process.

4. Several members of a school may complete the TSC in order to identify differences in their perceptions of the school. Such evaluation could be catalytic to discussions of problem areas and differences of perception within the school.

5. Educators may use the TSC as an instructional tool to teach change agents or students interested in change, to identify key organizational variables which effect the adoption process.

6. Research organizations may use the TSC to identify highly innovative or noninnovative schools for pilot testing of new programs, in order to measure the effects of the program in varied settings.

Limitations on use. Users should keep in mind that the TSC is a new instrument. While the TSC does have reliability, some indications of validity, and norms based on a limited sample, the TSC has not been used extensively in either experimental or field studies. Therefore, the developer cautions users not to rely solely on TSC scores for decision making.

Administration of the TSC. The TSC is easily completed and hand scored (see scoring section). The respondent is simply required to respond to each descriptive statement on a 1 - 5 scale (ranging from "very typical" to "very atypical"). In addition, the respondent may use either an "NA" or "?" to indicate if an item is Not Applicable to the particular institution (NA), or if s/he does not have the necessary information (?). If a respondent uses a "?" for a response, s/he should try to obtain the needed information before scoring the instrument. Time required to complete the instrument, after an individual has familiarized him/herself with an institution, is estimated to be 20 to 30 minutes. Scoring is estimated to take 15 minutes.

Members of an organization should be able to complete most items based on their immediate knowledge of the institution. External change agents should first study the instrument in order to become completely familiar with the information required to complete the form, and then spend a few days meeting with and interviewing various members of the organization in order to obtain the necessary information. The author urges that interviews be conducted with a variety of people, both receptive and unreceptive, of varying influence in the organization, in order to obtain the most complete impression of the institution. In such interviews, students should not be neglected. They can be a valuable source of information.

Technical Development of the TSC

Origin of the TSC

The school-based TSC was an outgrowth of the higher-educational TSC which is documented in other reports (Manning, 1973; 1974; 1975). The items for the school-based TSC were collected from two sources: an extensive literature search for information describing innovative and noninnovative schools; and, 45-minute interviews with ten practicing school-based change agents. The information collected from the literature search was organized in the form of a series of referenced paragraphs summarizing study findings. Items were written using these paragraphs as an information base. In taped interviews, school-based change agents were asked questions about the school and school district environment. The specific questions generally corresponded with the major areas which emerged from the literature. The tapes were then partially transcribed for information which would be likely to yield items, and items were subsequently written. These items described either innovative or noninnovative school characteristics. Based on these interviews and the literature search, an item pool of 500 descriptive statements was collected and sorted into seven major areas of information: information on the school-based staff; information on communications; information on previous innovative experience; information on the central administration; information on school/community relations; information on the organizational climate; and, information on the students.

These 500 items were assigned to scales (corresponding to the seven information areas) and randomly divided into groups of 40 items. Each member of the project staff was asked to critique a set of items, indicating items which needed to be modified or eliminated. After this first screening procedure, 200 items remained. These 200 items were used to build the second experimental form of the school-based TSC (the first experimental form was a mock-up used for a workshop). The second experimental form was then given to organizational

development specialists who critiqued each item in detail. Based on these critiques, the items were again re-written and the third experimental form emerged. The third form of the school-based TSC consisted of 200 randomized items in a Likert-type format. Each item described either an innovative or a noninnovative school characteristic.

Item Analysis

Approximately 41 school-based personnel were asked to anonymously complete the third experimental form of the school-based TSC. Only 30 TSC's were returned in time to be included in the data base for the item analysis study.

The first analysis focused on the following question: do items assigned to one of the two groups of items (items describing innovative institutions and items describing noninnovative institutions), belong with their respective groups? Because all participants did not respond to all items, the analysis was conducted twice: in the first analysis, items which were left blank were given the neutral value of "3" (blanks = 3); and, in the second analysis, items which which were left blank were omitted from the analysis (blanks = omitted). Results of both analyses are recorded in Table 1. These analyses consisted of correlations between each item and the total score for each group of items (items describing innovative institutions and items describing noninnovative institutions). The alphas for the two groups were as follows: items classified as innovative α = .94; items classified as noninnovative α = .86; and total α for innovative and noninnovative = .90 (when blanks were omitted from the analyses). The respective alpha coefficients for the two groups(when blanks = 3) were as follows: .95, .87, and .92.

The second analysis focused on whether or not items were internally consistent within each of the seven scales. This analysis consisted of correlations between each item and each of the total scale scores (see Table 2). As evidenced

in the results, every scale except Scale 1 (school-based staff) demonstrated a certain degree of overlap. All but one item in Scale 1 had a higher correlation with its own scale than with any other scale. These results indicate that institutions which rate highly in one scale are likely to rate highly in other scales as well.

The final analysis, like the second analysis, focused on whether or not items were internally consistent within each scale and within the entire instrument (see Table 3). This analysis resulted in correlations of each item with the total score of the instrument and with total scale scores. The alphas of the seven scales and total (blanks = omitted) are represented in the table below:

Scale No.	Items in Scale	Alpha
1	30	.57
2	29	.80
3	30	.83
4	30	.73
5	27	.69
6	30	.65
7	24	.77
TOTAL	200	.94

Item Selection

The analyses described above provided the basis for the selection of the final 100 TSC items. The selection procedure required the compilation of a detailed summary of the analyses containing each item followed by correlations

on each analysis. In such a way, the results of all analyses could be reviewed at once, in order to determine which items correlated highest across the analyses. In addition, items were examined in terms of content. When several individuals failed to respond to a particular item, the item was examined to determine if it required information that was difficult to obtain, or whether the item required information which was easily obtainable, but unknown to the respondent. In addition, particularly in borderline cases, the content of items was also considered in order to insure that a full range of variables would be represented within each scale.

The final 100 items were then re-analyzed for new alpha coefficients in order to determine the reliability coefficients for the final five scales and total scores. The alphas for the final 100 TSC items are presented in the table below:

Scale No.	Items in Scale	Alpha
1	13	.79
2	15	.89
3	16	.92
4	14	.84
5	13	.82
6	15	.87
7	14	.89
TOTAL	100	.97

Format and Scoring

Format

The TSC consists of 100 descriptive statements. These statements are randomly arranged, and can be broken into the following seven scales:

Scale I: School-Based Staff
(Items in this scale describe personality and leadership styles of principals, teachers and counselors.)

Scale II: Communication
(Items in this scale describe communication activities throughout the entire school system.)

Scale III: Innovative Experience
(Items in this scale describe a school's experience with innovations and attitudes towards innovation.)

Scale IV: Central Administration
(Items in this scale focus on relations between the central offices, school and school board.)

Scale V: School/Community Relations
(Items in this scale attempt to tap information on such variables as the amount and sources of funding, the degree of interest and involvement of community groups in the school system, and attitudes of the community towards the school.)

Scale VI: Organizational Climate
(Items in this scale describe the work climate and organizational structure of both the school and the district.)

Scale VII: Students
(Items in this scale describe student behavior, attitudes, and demographic characteristics.)

Each item is to be rated on a five point scale ranging from "very typical" to "very atypical." A "?" may be used when one doesn't have enough information to respond to an item, and the symbol "NA" may be used when a statement is not applicable to a particular school. The instrument provides seven scale scores in addition to a total score.

Scoring

Scoring of the TSC can be done by hand and requires approximately 15 minutes. As explained in detail below, all items which describe noninnovative organizational characteristics must be reverse keyed before the scores are summed. Scores are then added for each scale and for the total instrument. Those respondents who have chosen to use the symbols "NA" and "?" should refer to the Score adjustment formula section which provides a formula for equalizing the scores of TSC's in which these symbols were used, with the scores of TSC's in which these symbols were not used.

Reverse key scoring. The item numbers listed below are reverse keyed, and should have their rating values adjusted in the following manner:

item response		reverse score value	
5	=	1	
4	=	2	
3	=	3	(reverse keyed items rated 3 should not be changed)
2	=	4	
1	=	5	

For example, if you have marked one of the following items a "1," it should be changed to a "5" for scoring purposes; if you have marked one of the following items a "4," it should be changed to a "2" for scoring purposes. The following items should be reverse keyed:

1	13	25	39	46	59	78	92
2	14	28	41	48	61	81	93
4	18	30	42	49	65	82	100
8	22	32	43	55	72	85	
9	23	38	45	58	73	87	

Scales. In order to derive each scale score, add the ratings for the respective item numbers listed below (the symbols "?" and "NA" should be assigned 0 score values):

Scale I:	5	41	68	85
	33	59	73	
	35	66	78	
	37	67	80	
Scale II:	7	24	60	87
	16	29	75	91
	19	53	76	98
	20	56	82	
Scale III:	3	25	47	64
	11	32	50	79
	17	42	58	84
	23	45	62	100
Scale IV:	4	22	61	96
	9	30	81	97
	14	36	89	
	21	43	90	
Scale V:	1	27	40	93
	12	31	44	
	13	34	52	
	26	39	70	
Scale VI:	6	38	55	86
	8	46	63	92
	10	48	72	99
	18	51	74	
Scale VII:	2	54	71	94
	15	57	77	95
	28	65	83	
	49	69	88	

Deriving total score. After the item ratings have been changed as described above, add up all ratings to the left of items for the total score.

Score adjustment formula. If you have chosen to use the symbols "?" or "NA," it is necessary to use the following score adjustment formula. The score adjustment formula equalizes the scores of TSC's in which these symbols have been used with the scores of TSC's in which these symbols have not been used. This formula assumes that the items receiving a numerical response are representative of the entire scale content. All items rated "NA" or "?" receive a 0 score value in this formula.

$$\frac{\text{Actual computed score for scale}}{\text{Number of items not marked with a "?" or "NA" on scale}} \quad X \quad \text{Number of items in scale}$$

For example, in order to score Scale I, first reverse key items as explained above. After reverse keying the items, add up the total score (giving "?" and "NA" a score value of 0). If an individual has three "?'s," two "NA's," four "1's," two "2's," and two "3's," the formula would be completed as follows:

$$\frac{\text{Actual computed score for scale}}{\text{Number of items not marked with a "?" or "NA" on scale}} = \frac{14}{8} \times 13 \text{ (Number of items in scale)} \qquad \frac{14}{8} \times 13 = 22.75 \text{ (score for Scale I)}$$

Similarly, the score adjustment formula for the total score is as follows:

$$\frac{\text{Actual computed score for entire TSC}}{\text{Number of items not marked with a "?" or "NA" on entire TSC}} \quad X \quad \text{Number of items in TSC}$$

For example, if an individual rates an institution using five "?'s," five "NA's," ten "1's," ten "2's," forty "3's," twenty "4's," and ten "5's" the formula would be completed as follows (after reverse keying the items):

$$\frac{280}{90} \times 100 = 311.11$$

Indications of Validity

Due to limited resources at this time, a full scale study of validity has not been possible. However, some indications of validity are available. During the item analysis study, respondents were asked to complete a subjective rating form (see Appendix A) on the same school which was rated on the TSC. On this form, respondents were asked to indicate their subjective assessment of the school's potential for successfully adopting educational innovations. On a scale of 1 - 4 (1 indicating no potential for innovation, and 4 indicating excellent potential for innovation), respondents were asked to provide an overall rating and seven scale ratings. Each respondent's subjective ratings were then correlated with his/her TSC scores. These relationships were analyzed using a multitrait-multimethod matrix (Campbell & Fiske, 1959), and examined in terms of convergent and discriminant validity in order to explore the possibility of any indications of validity.

In order to establish convergent validity, there must be a significant correlation between two different measures of the same trait. Discriminant validity requires that:

> The correlations between two different methods measuring the same trait exceed (a) the correlations obtained between that trait and any other trait not having method in common and (b) the correlations between different traits which happen to employ the same method. Variance among test scores can be due to method and/or trait factors. The multitrait-multimethod matrix presents all the inter-correlations which result when selected traits are measured by two or more methods (Borich & Bauman, 1972, p. 1031).

Because the subjective ratings were made by the same person who completed the instrument, this study does not qualify as a true validity study. However, since this comparison is the only data available upon which to base indications of validity, the data will be analyzed as in a validity study.

Examining the four quadrant multitrait-multimethod matrix for the correlations between TSC ratings and subjective ratings (see Table 4), there is evidence of convergent validity. As evidenced in Table 4, all of these correlations are significantly different from zero, with the exception of Scale VII. These correlations, starting with Scale I through the total scores, are as follows: .781, .670, .773, .640, .478, .690, .049, and .642. Such correlations are indicative of the existence of convergent validity.

The first method of establishing discriminant validity is to determine if the values in the validity diagonal (see Table 4) are higher than the values in the corresponding rows and columns of the adjacent correlation triangles (heterotrait-heteromethod triangles). For example, when .781 (subjective Scale I with TSC Scale I) is compared with the correlations <u>across</u> the quadrant (first row) and <u>down</u> the quadrant (first column), .781 is found to be higher than 13 out of the 14 correlations. The rest of the correlations are as follows: .670 is higher than all 14 correlations; .773 is higher than 13 correlations; .640 is higher than 12 correlations; .478 is higher than seven correlations; .690 is higher than 13 correlations; .049 is higher than six correlations; and, .642 is higher than eight out of its 14 associated row and column correlations (of the six higher correlations, four were approximately the same). Using this procedure for determining the existence of discriminant validity, there are indications of discriminant validity only for Scales I, II, III, IV, and VI.

A second procedure used to establish discriminant validity requires that the values in the validity diagonal are higher than the triangles in the first and fourth quadrants (heterotrait-monomethod triangles). These triangles represent the common influence of the same method on the seven scales and total scores. In other words, this second criterion requires that the trait

variance should be larger than the method variance. As can be seen by examining the table, the first correlation, .781 (reading down the validity diagonal) is higher than all but one of the 28 correlations in the heterotrait-monomethod triangle directly above the validity diagonal. This same coefficient (.781) compared to the heterotrait-monomethod triangle in the fourth quadrant (subjective rating correlated with subjective rating) is higher than 11 out of 28 correlations. The remainder of the correlations are as follows: .670 is higher than 22 correlations in the first quadrant, and higher than one correlation in the fourth quadrant; .773 is higher than all but one of the correlations in the first quadrant and higher than 11 correlations in the fourth quadrant; .640 is higher than 21 correlations in the first quadrant, and lower than all 28 correlations in the fourth quadrant; .478 is higher than 10 correlations in the first quadrant and lower than all correlations in the fourth quadrant; .690 is higher than 23 correlations in the first quadrant triangle, and lower than all but four of the correlations in the fourth quadrant triangle; .049 is lower than all the correlations in both the first and fourth quadrant triangles; and .642 is higher than 21 out of 28 of the correlations in the first quadrant triangle, but lower than all of the correlations in the fourth quadrant triangle. Thus, using this method, there is not evidence of discriminant validity. However, the high inter-correlations among the subjective with subjective scales may indicate a unitary factor (see the discussion section).

A third criterion for the establishment of discriminant validity requires that the same pattern appear in all the trait-method triangles discussed above. As illustrated below, the four heterotrait (both monomethod and heteromethod) triangles do have similar patterns of correlations (high and low are, of course, relative to each triangle, since the focus is on <u>pattern</u> and not size of the correlations). The table below describes this pattern:

	1	2	3	4	5	6	7
1							
2	high						
3	high	high					
4	med.	high	med.				
5	med.	med.	med.	high			
6	high	high	high	high	med.		
7	low	low	low	low	low	low	
total	high	high	high	high	high	high	low

Using this method of determining discriminant validity, it can be concluded that an indication of discriminant validity does exist.

Discussion of Validity

In analyzing the results of this study, it should be emphasized that the above discussion is not a validity study in the usual sense. Instead, it is a study of the relationship between clinical subjective ratings of an institution's innovative potential (with respect to seven areas of an institution's environment plus an overall rating) and the corresponding TSC ratings. In each of the 37 institutions included in the analysis, both sets of ratings were made by the same individual. A true validity study would have, of course, contained an independent set of subjective ratings of the same institution made by a different group of judges. In other words, in this correlational analysis, the approach, of necessity, was limited to having the same raters use a different means to rate the same institution. In a true validity study, the instruments would not only be different, but the raters would be different.

Only one method of determining discriminant validity indicates validity (see method 3). The data suggest that the subjective scales do not discriminate

in measuring all the factors of the TSC scales and instead, measure a single factor. The eight ratings may be more reflective of a global attitude than of specific judgments of different aspects of an organizational environment due to the brevity of the subjective ratings. The possibility of a global attitude is buttressed by the fact that all of the correlations in the subjective with subjective quadrant correlate highly (see the second method for determining discriminant validity). In some cases, specific subjective ratings correlated higher with other TSC scales than with their own scale (e.g., TSC Scale III correlated higher with several other subjective scales than with its own scale).

In sum, the results of the analyses of subjective ratings with TSC scores are inconclusive. The similar patterns which emerged in the third method of determining discriminant validity provide the only indications of discriminant validity. However, the fact that similar patterns emerge, provides evidence against the hypothesis of a unitary factor. Results of other methods of establishing discriminant validity as well as the higher inter-correlations of the fourth quadrant, suggest the possibility of a unitary factor. A true validity study must be conducted to determine whether a unitary factor exists, or whether the instrument demonstrates discriminant validity. The author invites others to complete such a study or contribute information towards such a study.

Finally, the student scale correlations (Scale VII) should be interpreted with caution. Many of the respondents reported that they were insufficiently familiar with the students to be confident about their ratings on this scale.

Content validity is evidenced in the development section of this manual, as well as in two other papers (Manning, 1974; 1975). The instrument is based on both research literature and change agent responses to questions focused on the information areas contained in this instrument. In addition, other professional

researchers on the sponsoring project have offered their suggestions and critiques throughout the developmental process. Finally, organizational development specialists contributed suggestions for revisions.

TABLE 4

CORRELATIONS BETWEEN TSC RATINGS AND SUBJECTIVE RATINGS

(N = 37)

		TSC Rating								Subjective Rating							
		Scale I	Scale II	Scale III	Scale IV	Scale V	Scale VI	Scale VII	Total Score	Scale I	Scale II	Scale III	Scale IV	Scale V	Scale VI	Scale VII	Overall Rating
TSC Rating	Scale I																
	Scale II	.620															
	Scale III	.682	.576														
	Scale IV	.436	.612	.528													
	Scale V	.372	.391	.488	.541												
	Scale VI	.572	.650	.700	.562	.560											
	Scale VII	-.086	.238	.181	.307	.398	.254										
	Total Score	.615	.816	.735	.708	.575	.699	.282									
Subjective Rating	Scale I	.781	.647	.786	.536	.665	.674	.610	.750								
	Scale II	.560	.670	.605	.539	.490	.656	.482	.645	.816							
	Scale III	.653	.628	.773	.538	.604	.660	.619	.720	.836	.772						
	Scale IV	.461	.598	.594	.640	.609	.708	.500	.658	.648	.740	.731					
	Scale V	.274	.445	.483	.430	.478	.456	.339	.468	.747	.700	.812	.863				
	Scale VI	.550	.644	.642	.516	.527	.69[illegible]	.533	.661	.829	.892	.852	.841	.805			
	Scale VII	-.174	.050	-.031	.005	-.030	.024	.049	-.014	.672	.678	.683	.695	.735	.796		
	Overall Rating	.567	.621	.648	.499	.590	.626	.445	.642	.883	.899	.914	.877	.896	.963	.833	

Norms

The norms are based on a group of 51 individuals who would be likely users of the TSC. They all worked in school settings in roles of teachers, administrators, or change agents, and had an interest in the development of an instrument predictive of an organization's change potential. They filled out the instrument on a school with which they were familiar, with the understanding that they would not have to identify themselves or the school which they rated. A table of Percentile Equivalents for school-based TSC scores is presented in Table 5. This table gives percentile ranks and their corresponding raw score values for all seven scales and total score. In addition, means, medians, standard deviations and standard errors of the means are presented for each of the seven scales and total score.

Of course, norms based on an N of 51 have limited value, but they represent a beginning. The instrument appears to be internally consistent, and indications of validity have been presented. Further use of the instrument seems to be warranted. The developer invites any institutions using this instrument to share their data, so that more extensive norms can later be published. It is, of course, also hoped that groups of institutions will generate their own norms.

Table 5

PERCENTILE EQUIVALENTS

FOR SCHOOL BASED TSC SCORES

(N = 51)

Percentile Rank	Scale Score Values							
	I	II	III	IV	V	VI	VII	Total
100.0	73.00	78.00	92.00	85.00	73.00	88.00	74.00	559.00
98.0	70.00	77.00	89.50	84.00	70.00	86.50	72.00	551.00
96.1	65.00	76.00	87.00	80.00	67.00	85.00	71.00	536.00
94.1	64.00	75.00	83.00	79.00	63.00	84.00	69.00	519.00
92.2	62.50	73.00	82.50	75.00	62.00	78.00	66.00	482.00
90.2	61.00	71.00	82.00	73.00	61.00	74.00	63.00	475.00
88.2	59.00	70.00	81.00	68.00	59.00	72.00	62.50	452.00
86.3	58.50	69.66	78.50	66.50	58.25	71.00	62.00	446.00
84.3	58.00	69.33	76.00	65.00	57.50	70.00	61.00	445.00
82.4	57.00	69.00	74.00	64.00	56.75	69.00	60.50	427.00
80.4	56.00	63.00	70.00	62.00	56.00	65.00	60.00	420.00
78.4	55.50	60.00	69.50	61.66	55.66	64.00	58.00	416.00
76.5	55.00	59.00	69.00	61.33	55.33	63.00	57.50	413.00
74.5	54.00	58.50	68.00	61.00	55.00	62.50	57.00	408.00
72.5	53.00	58.00	67.75	59.00	54.00	62.00	56.66	400.00
70.6	52.50	57.00	67.50	58.50	53.66	61.00	56.33	399.00
68.6	52.00	56.00	67.25	58.00	53.33	60.00	56.00	396.00
66.7	51.50	55.34	67.00	57.66	53.00	59.85	55.00	395.00
64.7	51.00	54.67	66.00	57.33	52.00	59.68	54.00	393.00
62.7	50.75	54.00	65.00	57.00	51.75	59.51	53.00	392.00
60.8	50.50	53.66	64.50	56.00	51.50	59.34	52.66	391.00
58.8	50.25	53.33	64.00	55.80	51.25	59.17	52.33	386.00
56.9	50.00	53.00	63.66	55.60	51.00	59.00	52.00	385.50
54.9	49.80	52.00	63.33	55.40	50.66	58.00	51.50	385.00
52.9	49.60	51.66	63.00	55.20	50.33	57.75	51.00	382.00
51.0	49.40	51.33	62.50	55.00	50.00	57.50	50.00	378.34
49.0	49.20	51.00	62.00	54.50	49.75	57.25	49.00	375.67
47.1	49.00	50.75	61.00	54.00	49.50	57.00	48.80	373.00
45.1	48.00	50.50	60.50	53.85	49.25	56.50	48.60	369.00
43.1	47.50	50.25	60.00	53.68	49.00	56.00	48.40	368.00
41.2	47.00	50.00	59.00	53.51	48.66	55.00	48.20	365.00
39.2	46.75	49.50	58.00	53.34	48.33	54.50	48.00	361.00
37.3	46.50	49.00	57.00	53.17	48.00	54.00	47.00	357.00
35.3	46.25	48.00	56.66	53.00	47.00	53.50	46.50	355.00
33.3	46.00	47.00	56.33	52.00	46.66	53.00	46.00	352.00
31.4	45.80	46.00	56.00	51.66	46.33	52.75	45.00	351.00
29.4	45.60	45.75	55.34	51.33	46.00	52.50	44.00	348.00
27.5	45.40	45.50	54.67	51.00	45.75	52.25	43.00	345.00
25.5	45.20	45.25	54.00	50.80	45.50	52.00	42.50	341.00
23.5	45.00	45.00	53.00	50.60	45.25	51.50	42.00	337.00
21.6	44.00	44.50	52.00	50.40	45.00	51.00	41.66	333.00
19.6	43.00	44.00	51.50	50.20	44.50	50.00	41.33	332.00
17.6	42.00	43.50	51.00	50.00	44.00	49.75	41.00	330.00
15.7	41.00	43.00	50.00	49.00	43.00	49.50	40.50	329.00
13.7	40.50	42.00	48.00	48.50	41.00	49.25	40.00	324.00
11.8	40.00	40.00	47.00	48.00	40.00	49.00	38.00	321.00
9.8	39.00	39.00	46.00	47.34	39.50	48.00	37.50	319.00
7.8	37.00	36.00	44.50	46.67	39.00	47.66	37.00	317.00
5.9	36.00	33.00	45.00	46.00	38.50	47.33	36.00	316.00
3.9	35.00	31.00	43.00	43.00	38.00	47.00	34.00	305.00
2.0	31.00	26.00	32.00	34.00	26.00	40.00	33.50	226.00
0.0	30.00	25.00	31.00	33.00	25.00	39.00	33.00	225.00
Mean	50.08	53.45	63.02	57.45	50.86	59.67	51.22	385.78
Median	50.00	52.00	63.00	55.00	50.00	58.00	50.00	377.00
Std. Dev.	8.62	12.24	12.96	10.16	8.66	10.86	10.07	65.10
Std. Error of Mean	1.21	1.71	1.81	1.42	1.21	1.52	1.41	9.11

APPENDICES

APPENDIX A

SUBJECTIVE RATING SHEET

Subjective Rating Sheet

Please assign a rating of 1 - 4 for each of the following categories, with respect to the school's potential for adopting innovations:

4 = excellent potential for innovation
3 = good potential for innovation
2 = limited potential for innovation
1 = virtually no potential for innovation

___ 1. Overall rating of school.

___ 2. School-based staff. This category focuses on leadership and personality styles of teachers, principals, and counselors in relation to school innovativeness. Particular considerations should include interpersonal and professional interaction patterns, staff attitudes, previous working experience, and demographic characteristics of the school-based staff.

___ 3. Communications. This category focuses on communication variables which significantly affect a school's potential for successfully adopting an innovation. In particular, this category is concerned with patterns of communication (both within the school and the entire school system), initiators of communication, and types and forms of communication (with respect to both formal and informal channels of communications).

___ 4. Innovative experience: This category focuses on the school's experience with innovations and attitudes towards innovation. Focus is on both past attempts at innovation and present plans for innovation. Particular variables which should be considered are: the degree to which a school has prepared itself for the adoption of innovation; the reasons for considering adoption of innovations; the extent to which the school has realistically assessed its needs; and the consultant role, the district role, and the community role in relation to both past and present plans for adopting innovations.

___ 5. Central administration: This category focuses on relations between the central offices, school, and school board, and identifies attitudes of the central offices and school board toward innovation, their roles in relation to the school, and their awareness of the school's particular problems and needs.

___ 6. School/community relations: This category focuses on such variables as the amount and sources of funding, the degree of interest and involvement of community groups in the school system, the socio-economic environment, and attitudes of the community towards the school.

____ 7. Organizational climate: This category focuses on the work climate and organizational structure of both the school and the central district office. Some of the particular organizational variables which should be considered include: how decisions are made; how goals are established; what task groups exist; how task groups function; how planning takes place; what resources are available; how resources are used; how the organizational hierarchy is defined both within the school and the school district; and, the degree of centralization within the school district.

____ 8. Students: This category focuses on student behavior, attitudes, and demographic characteristics. Particular considerations should include: student behaviors in the classroom and the lunchroom; absenteeism; tardiness; discipline problems; minority relations; teacher/student rapport; and academic excellence.

APPENDIX B

REFERENCES

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APPENDIX C

TABLES

Table 1*

Items classified with scores of own scale (innovative/noninnovative) and with total score of instrument

Item Number	Items classified as innovative correlated with total score of all items classified as innovative		Items classified as noninnovative correlated with total score of all items classified as noninnovative	
	Blanks=3	Blanks=Omitted	Blanks=3	Blanks=Omitted
1			.4815	.4849
2			.4976	.3901
3	.5839	.5147		
4			.5823	.5757
5	.5305	.4716		
6	.6101	.4090		
7	.5725	.5682		
8			.5146	.4229
9			.5611	.4361
10	.7261	.6976		
11	.5255	.5111		
12	.6338	.6230		
13			.4668	.4391
14			.3392	.3505
15	.5117	.5132		
16	.7148	.7012		
17	.5637	.5360		
18			.3502	.4320
19	.5646	.4987		
20	.5448	.5595		
21	.3810	.2775		
22			.3447	.4627
23			.3545	.4704
24	.7212	.7098		
25			.5743	.4496
26	.5623	.5928		
27	.6145	.4766		
28			.5687	.4760
29	.5145	.5054		
30			.4621	.4071

*This table includes information only on the final 100 items selected. Because all participants did not respond to all items, this analysis was conducted twice: in the first analysis, items which were left blank were given the value of "3" (blanks = 3); and in the second analysis, items which were left blank were omitted (blanks = omitted). Results of both analyses are recorded above.

Table 1 (cont.)

Item Number	Items classified as innovative correlated with total score of all items classified as innovative		Items classified as noninnovative correlated with total score of all items classified as noninnovative	
	Blanks=3	Blanks=Omitted	Blanks=3	Blanks=Omitted
31	.5572	.3943		
32			.4070	.4135
33	.6691	.6223		
34	.6586	.6461		
35	.6533	.6134		
36	.6663	.6463		
37	.7141	.5799		
38			.3817	.4620
39			.3142	.4151
40	.6310	.6112		
41			.4423	.4690
42			.6609	.5578
43			.5181	.5939
44	.6345	.6018		
45			.6812	.5869
46			.3634	.4959
47	.5445	.4685		
48			.7144	.5855
49			.3609	.3385
50	.5593	.5076		
51	.5304	.5476		
52	.5685	.5592		
53	.5014	.5713		
54	.4811	.4703		
55			.5244	.5489
56	.5829	.5924		
57	.4173	.4134		
58			.5667	.5832
59			.5246	.5092
60	.6428	.5788		
61			.3735	.4031
62	.4052	.6193		
63	.4366	.4117		
64	.4965	.4450		
65			.5154	.5078
66	.4792	.5109		
67	.6767	.6872		
68	.6146	.5136		
69	.4827	.4720		
70	.6192	.6078		

Table 1 (cont.)

Item Number	Items classified as innovative correlated with total score of all items classified as innovative		Items classified as noninnovative correlated with total score of all items classified as noninnovative	
	Blanks=3	Blanks=Omitted	Blanks=3	Blanks=Omitted
71	.4854	.5000		
72			.4473	.3903
73			.3737	.4292
74	.4083	.4346		
75	.5175	.4488		
76	.4541	.4727		
77	.3431	.2523		
78			.4625	.3842
79	.6828	.6150		
80	.5976	.4991		
81			.3924	.3728
82			.4274	.3623
83	.6305	.6196		
84	.6847	.6471		
85			.3662	.4119
86	.5965	.5521		
87			.4566	.4865
88	.2429	.2201		
89	.5395	.3352		
90	.6305	.6243		
91	.4114	.3959		
92			.5290	.6388
93			.4676	.4744
94	.6346	.5756		
95	.4768	.4821		
96	.4545	.4610		
97	.7087	.7241		
98	.5043	.4711		
99	.5644	.5154		
100			.6253	.6612

Table 2*

Each item correlated with total scale scores for seven scales

Item Number	Scale Number	Scales 1	2	3	4	5	6	7
1	5	-.288	.134	.115	.038	.417	.069	.440
2	7	-.277	-.096	.059	-.001	.095	.174	.565
3	3	.302	.527	.688	.413	.539	.671	.311
4	4	.174	.501	.511	.584	.455	.633	.523
5	1	.595	.397	.388	.435	.256	.469	.260
6	6	.519	.544	.326	.634	.288	.603	.102
7	2	.428	.525	.381	.439	.186	.391	.457
8	6	.047	.332	.425	.271	.429	.518	.437
9	4	-.052	.352	.423	.243	.468	.349	.544
10	6	.486	.567	.620	.575	.546	.548	.614
11	3	.251	.536	.617	.464	.518	.595	.282
12	5	.690	.419	.433	.513	.442	.350	.270
13	5	-.126	-.154	.071	.108	.195	.066	.182
14	4	.467	.418	.338	.563	.375	.517	.405
15	7	.359	.474	.285	.386	.308	.263	.554
16	2	.562	.756	.692	.508	.428	.628	.526
17	3	.286	.579	.535	.540	.472	.536	.164
18	6	.535	.515	.443	.439	.211	.577	.201
19	2	.339	.529	.343	.499	.474	.296	.118
20	2	.505	.689	.312	.480	.184	.532	.237
21	4	.233	.327	.261	.485	.412	.235	.326
22	4	.405	.495	.454	.730	.579	.576	.231
23	3	.415	.528	.684	.341	.398	.473	.291
24	2	.592	.638	.397	.566	.351	.546	.445
25	3	.263	.345	.524	.327	.258	.549	.352
26	5	.297	.536	.520	.504	.665	.475	.387
27	5	.420	.421	.469	.582	.508	.492	.359
28	7	-.012	.275	.360	.315	.252	.420	.259
29	2	.532	.676	.212	.388	.157	.350	.064
30	4	.234	.350	.537	.361	.560	.343	.079
31	5	.601	.361	.402	.608	.428	.608	.208
32	3	.174	.243	.445	.173	.210	.164	.150
33	1	.644	.638	.500	.478	.364	.480	.230
34	5	.541	.555	.629	.570	.580	.598	.563

*This table includes information only on the final 100 items selected. Items which did not receive responses from all participants in the sample were analyzed only on the basis of the responses which were received (i.e., Blanks = Omitted).

Table 2 (cont.)

Item Number	Scale Number	Scales 1	2	3	4	5	6	7
35	1	.769	.474	.554	.523	.412	.446	.171
36	4	.731	.520	.326	.639	.313	.436	.084
37	1	.724	.457	.522	.494	.507	.396	.481
38	6	.550	.364	.541	.574	.389	.612	.367
39	5	-.065	.179	.333	.198	.377	.187	.465
40	5	.424	.578	.450	.642	.480	.616	.292
41	1	.043	-.178	.014	.005	.011	.186	.158
42	3	.192	.232	.548	.319	.207	.440	.345
43	4	.237	.394	.627	.439	.431	.628	.392
44	5	.506	.474	.534	.633	.625	.510	.389
45	3	-.024	.297	.577	.226	.304	.457	.266
46	6	.235	.249	.411	.327	.529	.355	.186
47	3	.477	.318	.454	.335	.481	.329	.223
48	6	.082	.476	.515	.276	.231	.577	.325
49	7	-.097	.060	.017	.129	.069	.201	.563
50	3	.363	.434	.615	.411	.500	.439	.286
51	6	.433	.594	.346	.462	.219	.447	.170
52	5	.409	.312	.484	.428	.471	.507	.593
53	2	.405	.597	.229	.532	.133	.479	.090
54	7	.313	.336	.441	.264	.418	.376	.783
55	6	.302	.441	.519	.359	.346	.552	.287
56	2	.428	.667	.434	.455	.232	.527	.426
57	7	.230	.262	.212	.352	.388	.292	.627
58	3	.155	.290	.473	.246	.498	.385	.373
59	1	.062	.532	.431	.233	.293	.385	.061
60	2	.419	.736	.648	.493	.571	.589	.358
61	4	.300	.403	.281	.577	.353	.437	.128
62	3	.336	.592	.695	.405	.486	.667	.486
63	5	.423	.292	.397	.426	.349	.440	.407
64	3	.296	.481	.490	.324	.337	.287	.141
65	7	.334	.149	.370	.276	.330	.435	.692
66	1	.557	.408	.452	.262	.058	.409	.192
67	1	.633	.641	.641	.516	.372	.635	.251
68	1	.667	.420	.571	.396	.435	.524	.482
69	7	.388	.231	.364	.188	.354	.283	.628
70	5	.431	.452	.610	.536	.762	.571	.418

Table 2 (cont.)

Item Number	Scale Number	Scales 1	2	3	4	5	6	7
71	7	.388	.220	.400	.283	.437	.289	.598
72	6	.292	-.038	.222	.272	.185	.290	.222
73	1	.011	-.035	.045	.055	-.098	.150	.028
74	6	.432	.282	.273	.301	.273	.363	.164
75	2	.234	.541	.422	.328	.388	.410	.346
76	2	.411	.337	.613	.224	.342	.478	.242
77	7	.196	.343	.461	.312	.442	.316	.430
78	1	.076	.001	.215	.138	.078	.263	.308
79	3	.458	.620	.733	.492	.559	.674	.432
80	1	.414	.478	.439	.392	.488	.411	.335
81	4	-.067	-.092	.355	.010	.057	.219	.199
82	2	.239	.426	.174	.396	.121	.443	.132
83	7	.452	.460	.593	.512	.639	.386	.566
84	3	.534	.513	.651	.523	.587	.587	.269
85	1	.489	.191	.458	.298	.424	.532	.470
86	6	.384	.574	.497	.439	.492	.559	.358
87	2	.379	.588	.387	.696	.475	.574	.231
88	7	.078	.133	.267	.222	.368	.397	.547
89	4	.556	.357	.238	.605	.277	.434	.177
90	4	.635	.547	.417	.631	.296	.576	.189
91	2	.246	.630	.497	.453	.420	.405	.121
92	6	.447	.456	.531	.487	.369	.680	.169
93		.132	.359	.484	.357	.511	.230	.113
94	7	.525	.380	.532	.446	.454	.493	.352
95	7	.371	.328	.332	.478	.434	.395	.306
96	4	.327	.396	.295	.412	.337	.239	.252
97	4	.014	.681	.521	.576	.317	.666	.120
98	2	.403	.549	.348	.240	.058	.341	.281
99	6	.496	.669	.361	.384	.114	.488	.386
100	3	.223	.262	.582	.338	.304	.502	.381

Table 3*

Each item correlated with total score of instrument and total scale score

Item Number	Items classified as Innovative				Items classified as Noninnovative			
	R(Scale)		R(Total)		R(Scale)		R(Total)	
	Blanks = 3	Blanks = Omitted	Blanks = 3	Blanks = Omitted	Blanks = 3	Blanks = Omitted	Blanks = 3	Blanks = Omitted
1					.4450	.4174	.0466	.1619
2					.5952	.5653	.1482	.0864
3	.6163	.6884	.4934	.6224				
4					.5060	.5836	.5134	.6032
5	.5533	.5948	.4371	.4922				
6	.4161	.6034	.3245	.5347				
7	.5034	.5249	.4669	.4975				
8					.5769	.5177	.5064	.4395
9					.2956	.2402	.5043	.4165
10	.4724	.5480	.6337	.7000				
11	.5897	.6174	.5677	.5891				
12	.4076	.4423	.5016	.5458				
13					.1819	.1947	.0654	.0570
14					.4784	.5632	.5237	.5390
15	.5240	.5539	.4455	.4594				
16	.7231	.7556	.6881	.7330				
17	.5554	.5354	.4985	.5623				
18					.5203	.5774	.4496	.5210
19	.5439	.5291	.3955	.4633				
20	.6601	.6890	.5052	.5224				
21	.1860	.4850	.3295	.3999				
22					.6430	.7304	.4629	.6152
23					.6093	.6843	.4417	.5667
24	.5994	.6378	.5720	.6216				
25					.5835	.5240	.5699	.4707
26	.7249	.6654	.6373	.6011				
27	.5376	.5081	.4457	.5742				
28					.3307	.2595	.3575	.3398
29	.6408	.6762	.3759	.4229				
30					.5157	.3612	.4101	.4458

*This table includes information only on the final 100 items selected. Because all participants did not respond to all items, this analysis was conducted twice: in the first analysis, items which were left blank were given the value of "3" (Blanks=3); and, in the second analysis, items which were left blank were omitted (Blanks=Omitted). Results of both analyses are recorded above.

Table 3 (cont.)

Item Number	Items classified as Innovative				Items classified as Noninnovative			
	R(Scale)		R(Total)		R(Scale)		R(Total)	
	Blanks = 3	Blanks = Omitted	Blanks = 3	Blanks = Omitted	Blanks = 3	Blanks = Omitted	Blanks = 3	Blanks = Omitted
31	.4148	.4276	.4418	.5632				
32					.4328	.4453	.3060	.2869
33	.5518	.6444	.4976	.5933				
34	.5399	.5803	.6616	.7130				
35	.7157	.7693	.5011	.5928				
36	.5420	.5455	.4632	.5355				
37	.6615	.7244	.5111	.6260				
38					.5297	.6123	.5338	.6001
39					.1778	.3773	.2191	.2986
40	.4327	.4797	.5454	.6180				
41					.0384	.0426	.0331	.0348
42					.5812	.5475	.4762	.4141
43					.2865	.4394	.4125	.5664
44	.5603	.6253	.5686	.6474				
45					.6162	.5766	.4414	.3892
46					.2861	.3554	.2477	.4069
47	.3839	.4537	.3811	.4615				
48					.6138	.5773	.5341	.4539
49					.5487	.5629	.1480	.1582
50	.5839	.6154	.4533	.5477				
51	.4130	.4467	.4776	.4779				
52	.3800	.4706	.5100	.5608				
53	.6520	.5968	.5147	.4400				
54	.7434	.7831	.4905	.5112				
55					.5590	.5525	.4414	.5043
56	.6453	.6671	.5600	.5652				
57	.5930	.6267	.3989	.4060				
58					.4612	.4727	.4136	.4314
59					.5363	.5322	.3767	.3708
60	.7274	.7364	.6153	.6848				
61					.4309	.5769	.4113	.4396
62	.7292	.6954	.6837	.6591				
63	.4384	.4397	.4339	.4794				
64	.4933	.4896	.3843	.4283				
65					.7012	.6924	.4404	.4466
66	.5942	.5568	.4472	.4190				
67	.6269	.6334	.6531	.6608				
68	.6095	.6674	.5460	.6140				
69	.6014	.6280	.3952	.4213				
70	.7226	.7616	.6270	.6679				

Table 3 (cont.)

Item Number	Items classified as Innovative				Items classified as Noninnovative			
	R(Scale)		R(Total)		R(Scale)		R(Total)	
	Blanks = 3	Blanks = Omitted	Blanks = 3	Blanks = Omitted	Blanks = 3	Blanks = Omitted	Blanks = 3	Blanks = Omitted
71	.5265	.5978	.4507	.4534				
72					.3162	.2904	.3085	.2484
73					.0074	.0110	.1000	.0292
74	.3292	.3630	.3781	.3655				
75	.5523	.5413	.4250	.4783				
76	.4471	.3366	.5145	.4764				
77	.4320	.4304	.3931	.4457				
78					.1302	.0756	.2446	.1896
79	.6743	.7331	.6297	.7108				
80	.3953	.4142	.4095	.5229				
81					.0000	.0099	.1329	.1291
82					.4848	.4265	.4166	.3441
83	.5292	.5663	.5935	.6364				
84	.6190	.6512	.5795	.6532				
85					.4604	.4889	.4394	.4979
86	.5049	.5591	.5155	.5876				
87					.4736	.5875	.5122	.5911
88	.5389	.4370	.3072	.3492				
89	.6189	.6054	.3661	.4606				
90	.4870	.6308	.5420	.5823				
91	.5937	.6304	.4630	.5049				
92					.5640	.6801	.4405	.5618
93					.5123	.5106	.4441	.3977
94	.5756	.6524	.5056	.6098				
95	.4576	.5061	.4597	.4800				
96	.4049	.4118	.3669	.3775				
97	.4759	.5756	.6203	.6257				
98	.5068	.5489	.3290	.3989				
99	.4038	.4878	.4243	.5155				
100					.5444	.5825	.4057	.4671

APPENDIX D

THE "TROUBLE SHOOTING" CHECKLIST (TSC)

FOR SCHOOL-BASED SETTINGS

(Instrument)

The "Trouble Shooting" Checklist (TSC)

For School-Based Settings

Introduction and Instructions

The TSC consists of 100 Likert-type items describing school characteristics. These 100 items are randomly arranged and can be broken into seven scales focusing on particular organizational variables which affect the adoption-diffusion process. The history of the development of the instrument is included in the manual, as well as information on uses of the TSC, scale titles, numbers of items in each scale, and scoring instructions.

The respondent is asked to rate whether or not an item is descriptive (typical/atypical) of a particular school. Although there are descriptive statements about individuals outside of the school (such as the superintendent), the statements, nevertheless, focus on such a person in relation to the school. The school being rated should always be the point of reference.

The term change agent is used throughout the instrument. This term is used broadly, and includes both external change agents (individuals brought in from outside of the school system for the purpose of facilitating change), and internal change agents (permanent members of the organization who are responsible for facilitating change). The role of the change agent may range from assisting a school in problem-solving by giving of their own professional expertise, to providing contacts with all available resources, to actually taking part in decisions to adopt innovations and aiding in the implementation of adopted innovations. It is also assumed that the school you are rating is at least considering the adoption of one or more innovations (as reflected in items referring to "innovations"). Finally, the term curriculum specialist refers to any person who is responsible for the planning and development of the

curriculum. This person could be a permanent member of a school, or may be available through the central district offices for all schools in a district. Such a person may not be titled "curriculum specialist," however. The TSC should be completed in terms of the person who fulfills the role of curriculum specialist. If no one fulfills this role, simply mark "NA" (Not Applicable) in blanks next to items referring to curriculum specialists.

In order to complete the instrument, merely rate on a 1 - 5 scale (as indicated below), how closely each item describes the department you are rating, and record your ratings on the line directly to the left of the item.

5 = very typical
4 = somewhat typical
3 = neither typical nor atypical
2 = somewhat atypical
1 = very atypical

In addition, you may use one of the following two ratings:

(1) if the item is applicable to the school you are rating, but you do not know the information, use the symbol "?."

(2) if the item is not applicable to the particular school you are rating, use the symbol "NA."

The "Trouble Shooting" Checklist (TSC)
for School-Based Settings

Please rate on a 1 - 5 scale (as indicated below) how closely each item describes the school you are rating, or use one of the alternative symbols:

5 = very typical
4 = somewhat typical
3 = neither typical nor atypical
2 = somewhat atypical
1 = very atypical
NA = not applicable
? = no information at this time

____ 1. There is much concern from the state legislature over how the innovation will affect the curriculum.

____ 2. There are many discipline problems at this school.

____ 3. This school is considering innovations that contain easily alterable materials which can meet the demands of varied teaching situations.

____ 4. The central offices wait until there is a public outcry before they inform the school board of problems in the schools.

____ 5. Non-supporters of innovation work on committees and/or travel to school with supporters of innovation.

____ 6. The board members are highly concerned about faculty-administrative-board relations.

____ 7. Direct, two-way communication occurs between administrative staff and the teaching staff.

____ 8. The school district has an intricate bureaucratic system.

____ 9. The school places blame on the central office for most of its problems.

____ 10. Reasons for change are understood by members of this school.

____ 11. Analyses have been made concerning the effects of innovations on the entire school.

____ 12. It is part of the principal's job to maintain good relations with the community.

____ 13. The parents infrequently attend school events.

____ 14. The superintendent in this school system cannot withstand any criticism.

Please rate on a 1 - 5 scale (as indicated below) how closely each item describes the school you are rating, or use one of the alternative symbols:

5 = very typical
4 = somewhat typical
3 = neither typical nor atypical
2 = somewhat atypical
1 = very atypical
NA = not applicable
? = no information at this time

____ 15. The students respect individual differences among themselves.

____ 16. The teachers receive regular communications about what is happening in the school system at large.

____ 17. Change agents have been invited to return more than once for information on educational change processes.

____ 18. Teachers and principals do not jointly establish goals.

____ 19. Board members communicate often with the superintendent.

____ 20. The principal communicates well with the community.

____ 21. The board of education does not actively oppose innovations.

____ 22. The central office does not inform the school board about what is new in the field of education.

____ 23. The teachers at this school know very little about new educational practices.

____ 24. The principal often visits teachers' planning sessions.

____ 25. School personnel are pressured to change by the central school district office.

____ 26. The superintendent receives community opinion directly, rather than depending on central office staff to relay messages.

____ 27. This school system has effective representation in community politics.

____ 28. A large number of students at this school are receiving failing marks in their coursework.

____ 29. The principal communicates face-to-face with teachers and/or staff, rather than by memo or phone.

____ 30. The curriculum specialist does not have credibility with the teaching staff.

____ 31. Board members believe that the community supports innovation.

Please rate on a 1 - 5 scale (as indicated below) how closely each item describes the school you are rating, or use one of the alternative symbols:

5 = very typical
4 = somewhat typical
3 = neither typical nor atypical
2 = somewhat atypical
1 = very atypical
NA = not applicable
? = no information at this time

____ 32. Innovation attempts up to this time have not been carried out successfully on a day-to-day basis.

____ 33. The principal attends meetings and conferences outside of the school district.

____ 34. The parents are kept well-informed of school events.

____ 35. The teachers at this school ask well-informed questions about instructional procedures.

____ 36. There are well-informed research and evaluation personnel at the central office.

____ 37. The teachers have developed some new classroom practices on their own.

____ 38. The atmosphere among most teachers is more competitive than cooperative.

____ 39. Applications for funding in this school district require specific information on procedures and/or evaluation.

____ 40. This community has elected school board members who are interested in innovation.

____ 41. The counselor has a poor rapport with teachers.

____ 42. Teachers are pressured from the central offices to implement innovations quickly.

____ 43. The central administrative personnel favor innovations which do not alter the system's overall structure.

____ 44. The parents feel that they are able to give their opinions to the school administration.

____ 45. Innovations have been imposed externally in this school system without regard to specific local needs.

____ 46. There are no strong pressures for change outside of this particular school.

Please rate on a 1 - 5 scale (as indicated below) how closely each item describes the school you are rating, or use one of the alternative symbols:

5 = very typical
4 = somewhat typical
3 = neither typical nor atypical
2 = somewhat atypical
1 = very atypical
NA = not applicable
? = no information at this time

____ 47. Members of this school have requested the opportunity to see, in operation, an innovation which is under consideration.

____ 48. There are several isolated subsystems in this school.

____ 49. The students are extremely rowdy in the lunch room.

____ 50. The school plans for implementation of innovations include systematic procedures for staff education.

____ 51. The process of decision-making is clearly defined.

____ 52. The parents have supported educational changes in the past.

____ 53. The curriculum specialists have systematically collected information about the needs of the school through direct contact with teachers.

____ 54. The students feel that they are learning things which are relevant to them.

____ 55. Concrete activities, necessary for carrying out educational changes, have not yet been specified.

____ 56. The administrative staff communicates regularly with the teaching staff.

____ 57. Although these students have their ups and downs, they are not basically frustrated.

____ 58. This school would only be interested in making changes to avoid criticism from the school district central office.

____ 59. There are grave weaknesses in the channels and procedures for dissemination.

____ 60. The principal, teacher representative, or outside agent meets with small groups to determine the groups' understanding of the innovation.

____ 61. All power lies in the central offices of the school district.

____ 62. The superintendent involves the teaching staff, especially during the decision-making phases of the curriculum change process.

Please rate on a 1 - 5 scale (as indicated below) how closely each item describes the school you are rating, or use one of the alternative symbols:

5 = very typical
4 = somewhat typical
3 = neither typical nor atypical
2 = somewhat atypical
1 = very atypical
NA = not applicable
? = no information at this time

____ 63. Teachers have access to the kinds of resources which they feel they need.

____ 64. The person introducing the innovation has recognized authority in the school.

____ 65. The students don't seem to be paying attention in the classroom.

____ 66. The teachers at this school interact outside of school hours.

____ 67. Teachers at this school attend professional meetings outside of their school district.

____ 68. The teachers have some peer support system established to assist each other in their teaching responsibilities.

____ 69. The students work well independently.

____ 70. This school system is sensitive to community opinions.

____ 71. To a large degree, the students are self-directing.

____ 72. Groups of innovators and non-innovators have emerged in the form of in- and out-groups.

____ 73. The counselor serves the dual function of being an administrator and a counselor.

____ 74. The teachers are given sufficient time during the day to plan, eliminating the need to take most of their work home in the evenings.

____ 75. A school administrator initiates communications with the change agent.

____ 76. Teachers attend workshops teaching identification of problem areas in schools.

____ 77. The students feel that they have some control over their learning experiences.

____ 78. The school counselor has disciplinary responsibilities.

Please rate on a 1 - 5 scale (as indicated below) how closely each item describes the school you are rating, or use one of the alternative symbols:

5 = very typical
4 = somewhat typical
3 = neither typical nor atypical
2 = somewhat atypical
1 = very atypical
NA = not applicable
? = no information at this time

____ 79. Many types of instructional materials have been examined by members of this school system in order to determine what innovation would be best suited to their needs.

____ 80. A few of the teachers who have been with the school for a long time support innovation.

____ 81. The central office is pushing the adoption of innovations for the benefit of federal money.

____ 82. The principal does not often ask for suggestions from the faculty.

____ 83. Teachers and students have an informal rapport.

____ 84. Specific problems and needs have been identified by members of this school system.

____ 85. Most of the teachers leave school as soon as possible after the students are dismissed.

____ 86. The teachers at this school are encouraged to participate in summer planning sessions.

____ 87. The principal receives most communications from the central offices by way of memos.

____ 88. Students use some of their leisure time to do school related activities.

____ 89. The curriculum specialist evaluates in a constructive way.

____ 90. The central office provides individuals who are fostering research.

____ 91. The principal, teacher representative, or outside agent meets with small groups of teachers in order to receive teachers' opinions.

____ 92. No channels exist in the organization for appealing decisions.

____ 93. Local agencies which control funds are vague about how the funds can be used.

____ 94. Students are viewed by the teachers as being participative rather than passive.

Please rate on a 1 - 5 scale (as indicated below) how closely each item describes the school you are rating, or use one of the alternative symbols:

5 = very typical
4 = somewhat typical
3 = neither typical nor atypical
2 = somewhat atypical
1 = very atypical
NA = not applicable
? = no information at this time

____ 95. At least one-third of the students at this school are children of professionals.

____ 96. Decisions in the central offices are based on information contributed from all levels of the school system.

____ 97. The school board helps to obtain funding for innovations which are initiated by the individual schools.

____ 98. Teachers at this school can give their honest opinions to the principal with confidence.

____ 99. The principal encourages decision-making by consensus.

____100. Although the teachers have already been working with an innovation for some time now, they do not fully understand what the innovation is all about.